



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,996	11/14/2001	Bernd Halbrock	65857-0037	8824

10291 7590 09/30/2003

RADER, FISHMAN & GRAUER PLLC
39533 WOODWARD AVENUE
SUITE 140
BLOOMFIELD HILLS, MI 48304-0610

EXAMINER

DUNWOODY, AARON M

ART UNIT	PAPER NUMBER
----------	--------------

3679

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,996

Applicant(s)

HALBROCK ET AL.

Examiner

Aaron M Dunwoody

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

In order to avoid abandonment, the drawing informalities noted in Paper No. 7, mailed on 2/20/03, must now be corrected. Correction can only be effected in the manner set forth in the above noted paper.

Specification

The substitute specification filed 6/26/03 has been entered.

Claim Objections

Claims 2-14 are objected to because of the following informalities:

Claims 2-14 were canceled in the preliminary amendment filed 2/22/02; however, these claims are represented in the amendment filed 6/26/03 as pending claims. The Examiner will assume that claims 2-14 are canceled as cited in the preliminary amendment of the instant application. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 27 and 29 recite, "the support device is adapted to be located between the first and the second annular support surfaces"; however, it is not clear to the Examiner what this means because claim 1 and 29 recite, "a second connecting

Art Unit: 3679

element that includes a third sealing surface and ***an annular second support surface adapted to contact the first annular support surface***".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 15-23, 26 and 30-34 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 3600011, Alvis.

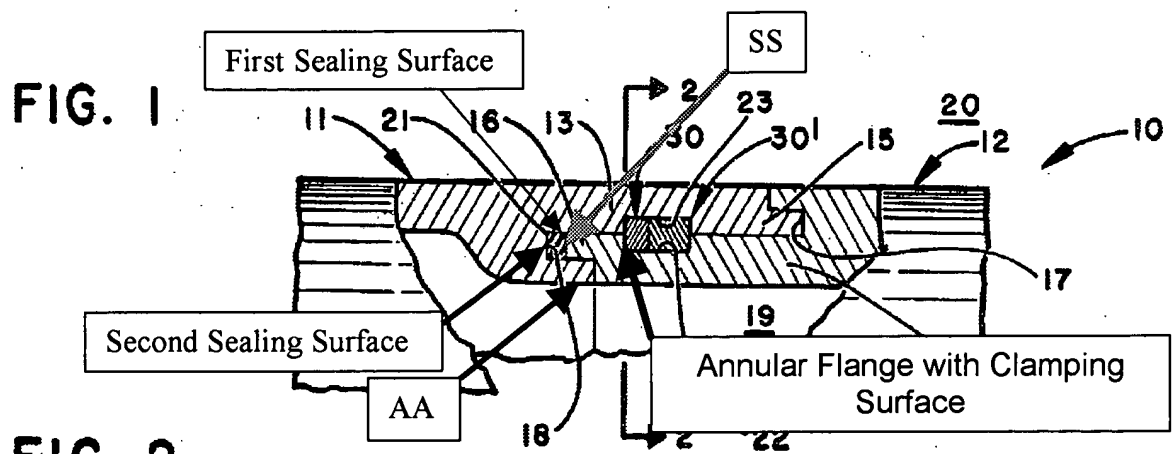
In regards to claim 1, Alvis discloses a quick-connect device for connecting fluid lines comprising:

a first connecting element (11) that includes an annular first support surface (AA), an inclined surface, and an annular receptacle space (18) with a first sealing surface and a second sealing surface,

an annular sealing element (21) that is arranged in the receptacle space and adapted to contact the first and second sealing surfaces,

a second connecting element (12) that includes a third sealing surface (SS) and an annular second support surface (16) adapted to contact the first annular support surface, and

a wedge-clamping device (30) that includes a clamping wedge adapted to contact the inclined surface of the first connecting element.



In regards to claim 15, Alvis discloses the annular sealing element being an O-ring.

In regards to claim 16, Alvis discloses the third sealing surface being adapted to contact the annular sealing element.

In regards to claim 17, Alvis discloses the first and second support surfaces being planar.

In regards to claim 18, Alvis discloses the wedge-clamping device including at least one clamp opening (24) adapted to have the clamping wedge inserted therein.

In regards to claim 19, in Figure 2, Alvis discloses the wedge-clamping device including two parallel clamp openings.

In regards to claim 20, Alvis discloses the clamp openings being formed by grooves (22, 23).

In regards to claim 21, Alvis discloses the grooves being wedge grooves.

Art Unit: 3679

In regards to claim 22, in Figure 1 above, Alvis discloses the second connecting element including an annular flange with a clamping surface.

In regards to claim 23, Alvis discloses the clamping wedge further including a locking device (30').

In regards to claim 26, Alvis discloses a support device (15).

In regards to claim 30, Alvis discloses a quick-connect device for connecting fluid lines comprising:

- a first connecting element having a receptacle space positioned about a central axis and a wedge receiving opening;

- a seal disposed within the receptacle space and around the aperture;

- a second connecting element having a flange, wherein the flange has a sealing face opposite a wedge face, wherein the second connecting element is adapted to abut the sealing face against the seal within the receptacle, and

- a wedge-clamping device that has a first connecting element face and a flange face, wherein the first connecting element face is at a non-parallel angle with respect to the flange face;

- wherein the wedge-clamping device is movably positioned in the wedge receiving opening and adapted to abut the flange face against the wedge face of the second connecting element;

- wherein the wedge-clamping device is adapted to abut the first connecting element face against a first defining face of the wedge receiving opening in the first connecting element;

Art Unit: 3679

wherein movement of the wedge within the wedge receiving opening in a first direction presses the flange face against the wedge face and presses the first connecting element face against the defining face to cause the sealing face to press against the seal.

In regards to claim 31, Alvis discloses the wedge clamping device being adapted to move along a non-parallel direction with respect to the central axis.

In regards to claim 32, Alvis discloses the movement of the wedge clamping device causing the sealing face to move in a direction parallel to the central axis.

In regards to claim 33, Alvis discloses a second defining face that defining a second face of the wedge receiving opening; wherein the first defining face is at a non-parallel angle with respect to the second defining face.

In regards to claim 34, Alvis discloses the non-parallel angle between the first defining face and the second defining face being substantially the same as an angle between the first connecting element and the flange face.

Art Unit: 3679

Claim R jections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alvis in view of US patent 6343813, Olson et al.

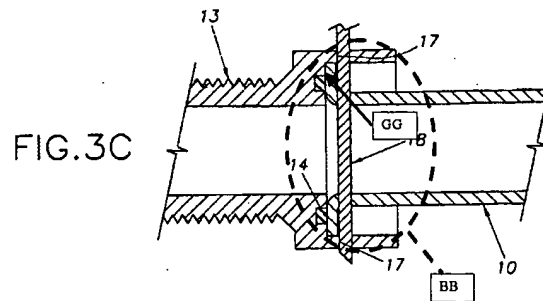
In regards to claim 24, Alvis discloses the claimed invention except for the clamping wedge being made from plastic. Olson et al illustrates a clamping wedge (10) being made of plastic. Further, plastic is a suitable material for use as a clamping wedge because of its low cost. It would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the clamping wedge from plastic, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 1, 15-23 and 25-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 5513882, Lewis in view of US patent 3384393, Horton et al.

In regards to claim 1, Lewis discloses a quick-connect device for connecting fluid lines comprising a first connecting element (13) that includes an annular first support surface (16), an inclined surface, and an annular receptacle space (BB in Figure 3C

Art Unit: 3679

below) with a first sealing surface and a second sealing surface (inside of the groove holding seal 14), an annular sealing element (14) that is arranged in the receptacle space and adapted to contact the first and second sealing surfaces, a second connecting element (10) that includes a third sealing surface (SS) and an annular second support surface (12) adapted to contact the first annular support surface, and a



clamping device (18).

Lewis does not disclose

a wedge-clamping device (18) that includes a clamping wedge adapted to contact the inclined surface of the first connecting element. Horton et al teaches a wedge-clamping device (E') that includes a clamping wedge (24, 25) adapted to contact an inclined surface of a first connecting element "to provide a connector embodying a wedge element which is applied and removed laterally of the connector instead of longitudinally thereof as now generally practiced" (col. 1, lines 61-64). As Horton et al is designed to simplify the operation applying and removing a clamping wedge, it would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate a wedge-clamping device that includes a clamping wedge adapted to contact an inclined surface of a first connecting element to provide a connector embodying a wedge element which is applied and removed laterally of the connector instead of longitudinally thereof as now generally practiced, as taught by Horton et al.

Art Unit: 3679

In regards to claim 15, Lewis discloses the annular sealing element being an O-ring.

In regards to claim 16, Lewis discloses the third sealing surface being adapted to contact the annular sealing element.

In regards to claim 17, Lewis discloses the first and second support surfaces being planar.

In regards to claim 18, Lewis discloses the wedge-clamping device including at least one clamp opening (17) adapted to have the clamping wedge inserted therein.

In regards to claim 19, in Figure 2, Lewis discloses the wedge-clamping device including two parallel clamp openings.

In regards to claim 20, Lewis discloses the clamp openings being formed by grooves.

In regards to claim 21, Lewis discloses the grooves being wedge grooves.

In regards to claim 22, Lewis discloses the second connecting element including an annular flange with a clamping surface.

In regards to claim 23, Horton et al discloses the clamping wedge further including a locking device (friction).

In regards to claim 25, Horton et al discloses each clamping opening being associated with a clamping wedge and the two clamping wedges are connected by a crosspiece

In regards to claim 26, Lewis discloses a support device (GG see Figure 3C above).

Art Unit: 3679

In regards to claim 27, as best understood, Lewis discloses the support device being adapted to be located between the first and second annular support surfaces.

In regards to claim 28, Lewis in view of Horton et al discloses a quick-connect device for connecting fluid lines comprising:

a first connecting element that includes an annular first support surface, an inclined surface, and an annular receptacle space with a first sealing surface and a second sealing surface,

an annular sealing element that is arranged in the receptacle space and adapted to contact the first and second sealing surfaces,

a second connecting element that includes a third sealing surface and an annular second support surface adapted to contact the first annular support surface, and a wedge-clamping device that includes two clamping wedge adapted to contact the inclined surface of the first connecting element and includes two clamp openings adapted to have the clamping wedges inserted therein.

wherein the two clamping wedges are connected by a crosspiece.

In regards to claim 29, as best understood, Lewis in view of Horton et al discloses a quick-connect device for connecting fluid lines comprising:

a first connecting element that includes an annular first support surface, an inclined surface, and an annular receptacle space with a first sealing surface and a second sealing surface,

an annular sealing element that is arranged in the receptacle space and adapted to contact the first and second sealing surfaces,

Art Unit: 3679

a second connecting element that includes a third sealing surface and an annular second support surface adapted to contact the first annular support surface,

a wedge-clamping device that includes a clamping wedge adapted to contact the inclined surface of the first connecting element, and

a support device is adapted to be located between the first and the second annular support surfaces.

In regards to claim 30, Lewis in view of Horton et al discloses a quick-connect device for connecting fluid lines comprising:

a first connecting element having a receptacle space positioned about a central axis and a wedge receiving opening;

a seal disposed within the receptacle space and around the aperture;

a second connecting element having a flange, wherein the flange has a sealing face opposite a wedge face, wherein the second connecting element is adapted to abut the sealing face against the seal within the receptacle, and

a wedge-clamping device that has a first connecting element face and a flange face, wherein the first connecting element face is at a non-parallel angle with respect to the flange face;

wherein the wedge-clamping device is movably positioned in the wedge receiving opening and adapted to abut the flange face against the wedge face of the second connecting element;

Art Unit: 3679

wherein the wedge-clamping device is adapted to abut the first connecting element face against a first defining face of the wedge receiving opening in the first connecting element;

wherein movement of the wedge within the wedge receiving opening in a first direction presses the flange face against the wedge face and presses the first connecting element face against the defining face to cause the sealing face to press against the seal.

In regards to claim 31, Horton et al discloses the wedge clamping device being adapted to move along a non-parallel direction with respect to the central axis.

In regards to claim 32, Horton et al discloses the movement of the wedge clamping device causing the sealing face to move in a direction parallel to the central axis.

In regards to claim 33, Lewis discloses a second defining face that defining a second face of the wedge receiving opening; wherein the first defining face is at a non-parallel angle with respect to the second defining face.

In regards to claim 34, Horton et al discloses the non-parallel angle between the first defining face and the second defining face being substantially the same as an angle between the first connecting element and the flange face.

Response to Arguments

Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 3679


Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure because it illustrates the current state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M Dunwoody whose telephone number is (703) 306-3436. The examiner can normally be reached on Monday - Friday between 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on (703) 308-1159. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

.amd 


Lynne H. Browne
Supervisory Patent Examiner
Technology Center 3670